

## USER INTERFACE FOR COLLECTING VIEWER RATINGS OF MEDIA CONTENT AND FACILITATING ADAPTION OF CONTENT RECOMMENDERS

### FIELD OF THE INVENTION

This invention relates to television (TV) recommenders, and more particularly to a user interface for collecting viewer ratings of TV shows and enabling user to correct any errors in preference profiles derived previously.

### BACKGROUND OF THE INVENTION

Personal television (PTV) services enable viewers to view programs at anytime, independent of when the broadcasters choose to show them. This is typically accomplished by providing viewers with Personal TV Recorders which are essentially set top boxes equipped with hard-drives. The PTV service is loaded on the hard-drives, thus, enabling the set top boxes to selectively record and playback live television broadcasts. Many of these PTV services include program recommenders which recommend television shows based on the viewer's personal TV viewing profile.

The TV viewing profiles are currently derived using three basic methods: implicit profiling; explicit profiling; and feedback profiling. Implicit profiling methods derive TV viewing profiles unobtrusively from the viewer's television viewing histories, i.e., sets of TV shows watched and not watched. Explicit profiling methods derive TV viewing profiles from viewer answered questionnaires that include explicit questions about what the viewer likes and dislikes. Feedback profiling methods derive TV viewing profiles from sets of TV shows for which a viewer has provided ratings of the degree of like or dislike.

However, conventional TV recommenders do not permit viewers to correct errors in previously derived profiles. Accordingly, a method is needed which permits viewers to correct possible errors in previously derived TV recommender preference profiles.

## SUMMARY OF THE INVENTION

One aspect of the present invention comprises a user interface for a recommender system. The user interface includes a display screen having a first region for displaying a rating derived from a previously defined profile contained in the recommender system; and a second region displaying preference settings in the profile which were used to derive the rating. The user interface enables the preference settings to be changed if the rating derived by the profile is incorrect.

Another aspect of the present invention comprises a method for correcting a previously defined preference profile used in a recommender system to more accurately reflect a user's preferences. The method includes displaying a rating derived from the previously defined profile; displaying preference settings in the profile which were used to derive the rating; and enabling the user to change at least one of the preference settings if the rating derived by the profile is incorrect.

A further aspect of the present invention comprises a recommender system having a preference profile; a user interface including a display screen having a first region for displaying a rating derived from the profile; and a second region displaying preference settings in the profile which were used to derive the rating; wherein the preference settings can be changed if the rating derived by the profile is incorrect.

## BRIEF DESCRIPTION OF THE DRAWINGS

The advantages, nature, and various additional features of the invention will appear more fully upon consideration of the illustrative embodiments now to be described in detail in connection with accompanying drawings where like numerals are used to identify like elements and wherein:

FIG. 1 is a diagram illustrating a user interface (UI) according to an exemplary embodiment of the present invention; and

FIG. 2 is a block diagram illustrating an exemplary embodiment of a television recommender which utilizes the UI of the present invention.

## DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 illustrates a user interface 10 (UI) according to an exemplary embodiment of the present invention. As shown in FIG. 2, the UI 10 of the present invention is typically associated with a conventional TV recommender system comprised of explicit and implicit based TV preference profiles 90, 100 which respectively provide input to explicit and implicit recommenders 110, 120. An electronic program guide 130 (EPG) inputs data relating to TV shows to both of the recommenders 110, 120. Such data may include the title, channel, start time and other features of each TV show. The UI 10 may be implemented on a display screen that a user can interact with.

The UI 10 of the present invention provides a method for displaying the characteristics of a TV show being evaluated for feedback, the inferred rating for this show, and the setting preferences of an existing profile that were used to derive this rating. Accordingly, a user of the

recommender system can advantageously recognize and correct any flaws in their TV viewing profile(s) that contributed to wrong inferences.

In the shown embodiment of FIG. 1, the UI 10 includes a first region 20 which may display the title of the TV show being evaluated, a second region 30 which may display the explicit rating score of the displayed TV show as derived by the explicit TV viewing preference profile of the associated recommender system and a third region 40 which may display the implicit rating score of the displayed TV show as derived by the implicit TV viewing preference profile of the associated recommender system. A fourth region 50 is provided to enable a user to correct preference settings in the user's explicit TV viewing profile, that were used to derive the subject TV show's explicit rating score. In particular, the fourth region 50 may include a query 52 that asks the user as to whether the user's previously derived preference setting for the displayed TV show is correct. The fourth region may also include a plurality of regions 54a-54f which indicate the user's TV viewing preference settings contained in the user's explicit TV viewing profile. In addition, regions 54a-54f may also permit a viewer to add any features about a TV show, as provided by the EPG, to the viewer's TV viewing profile. For example, in the shown embodiment, region 54a permits the title of the displayed TV show to be added to the viewer's TV viewing profile. These TV viewing preference settings associated with regions 54a-54f may include the user's preference setting for a particular TV show; the day and time slot of the TV show; the user's preference setting for the network which carries the TV show; the user's preference setting for comedy type TV shows; the user's preference setting for situation type TV shows; and the user's preference setting for animated TV shows.

A fifth region 60 may be provided, in addition to or instead of the fourth region, to enable the user to correct preference settings in the user's implicit TV viewing profile, that were used to

derive the subject TV show's implicit rating score. A sixth region 70 is provided for a button 72 which submits the feedback to the explicit and implicit based TV recommender profiles.

Although the present invention has been described as it applies to tuning TV viewing profiles used with TV recommenders, the principles of the present invention are not limited to this domain. For example, the principles of the present invention may also be applied to feedback based profile tuning devices for movie, book, audio recording and like recommenders.

While the foregoing invention has been described with reference to the above embodiments, various modifications and changes can be made without departing from the spirit of the invention. Accordingly, all such modifications and changes are considered to be within the scope of the appended claims.